

REMARKS

In the preliminary amendment, the undersigned has amended the description and substituted Claims 5-12 for Claims 1-4. No new matter has been introduced.

Early examination on the merits is respectfully solicited.

Respectfully submitted,



Joseph B. Lerch
Reg. No. 26,936
Attorney For Applicant(s)

DARBY & DARBY P.C.
805 Third Avenue
New York, NY 10022
(212) 527-7700

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Docket No.: 2598/01395

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Jae BEOM HAN ET AL.

Serial No: 09/803,511

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For: A DEFLECTION YOKE

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AMENDMENT MARK-UP SHEET FOR PRELIMINARY AMENDMENT

Hon. Commissioner of
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Washington, DC 20231

In the Description:

Please amend the paragraph starting at Page 2, Line 9, to read as
follows:

The coil separator 10 are provided to insulate a horizontal deflection coil 15 and a vertical deflection coil 16 and assembly them in place. The coil separator 10 include a screen portion 11a coupled to a screen panel side, a rear cover 11b, and a neck [portion] part 12 integrally extended from the central plane of the rear cover 11b to be coupled with an electron gun portion 3 of the CRT 1.

Please amend the paragraph starting bridging Pages 2 and 3 to read as follows:

The deflection yoke 4 configured like this is installed in the neck [portion] part 12 of the CRT to deflect an RGB electron beam for scanning location on the screen, in which the RGB electron beams are radiated from the electron gun 3a of the CRT 1 from the generation of the magnetic field due to Fleming's left-hand rule when a sawtooth pulse is applied to the horizontal deflection coils 15 and the vertical deflection coils 16.

Please amend the paragraph starting at Page 3, Line 20 to read as follows:

Also, a coma free coil (not shown) is installed around the outer periphery of a neck [portion] part 12 of the coil separator 10 to compensate a coma generated from the vertical deflection coils 16.

Please amend the paragraph starting at Page 4, Line 7 to read as follows:

Also, a coma free coil (not shown) is additionally installed around the outer periphery of a neck [portion] part 12 of the coil separator 10 to compensate a coma generated from the vertical deflection coils 16.

Please amend the paragraph starting at Page 5, Line 21, to read as follows:

It is therefore an object of the present invention to provide a deflection yoke which includes an iron plate on a neck [portion] part of a coil separator to convert PQH from a negative tendency to a positive one so that degradation of convergence features can be prevented to enhance qualities of products.

Please amend the paragraph starting at Page 6, Line 1 to read as follows:

[To] According to a first embodiment of the invention, to obtain the foregoing object [according to the present invention, it], there is provided a deflection yoke comprising: a coil separator [including a screen portion coupled to a screen panel of a CFT, a rear cover, and a neck portion extended from the central plane of the rear cover to be coupled to an electron gun portion of the CRT; horizontal and vertical deflection coils provided in the inner and outer sides

of the coil separator to form horizontal and vertical deflection magnetic fields to control an electron beam;] having a rear plate and a neck part which are defined therein and a printed circuit board which is positioned on a side thereof; at least one horizontal deflecting coil disposed on a circumferential inner surface of the coil separator to produce a horizontal magnetic field and connected to the printed circuit board; at least one vertical deflecting coil disposed on a circumferential outer surface of the coil separator to produce a vertical magnetic field; a ferrite core positioned on the circumferential outer surface of the coil separator to reinforce the horizontal and vertical magnetic fields of the horizontal and vertical deflecting coils; and compensating means provided in the neck [portion] part of the coil separator to compensate convergence on a screen.

Please amend the paragraph starting at Page 6, Line 11 to read as follows:

The compensating means according to the invention [are] is constructed of a pair of iron plates which are attached to one side of [said] the rear [cover] plate while wrapping the outer periphery of said neck [portion] part in opposite directions [with] to each other.

Please amend the paragraph starting at Page 6, Line 15 to read as follow:

The pair of iron plates according to the invention are made of a magnetic substance, in which each of [said] the iron plate [has] having a semi-circular configuration about [said] the neck portion.

Please amend the paragraph starting at Page 8, Line 15 to read as follows:

Also, the coma-free coils (not shown) are additionally installed around the outer periphery of the neck [portion] part 12 of the coil separator to compensate the coma generated from the vertical deflection coils 16.

Please amend the paragraphs from Page 9, Line 2 through Page 9, Line 10 to read as follows:

Also, the coma-free coils (not shown) are additionally installed around the outer periphery of the neck [portion] part 12 of the coil separator to compensate the coma generated from the vertical deflection coils 16.

Besides, the saddle-saddle type and saddle-toroidal deflection yokes include the printed circuit board (P) installed in one side of the coil separator 10 to supply power to the foregoing horizontal deflection coils 15 and the vertical deflection coils 16.

Please amend the paragraphs from Page 9, Line 14 through Page 9, Line 22 to read as follows:

The present invention is proposed to solve this problem by providing a compensating means in one side of a rear plate 145 adjacent to a neck [portion] part of a coil separator 100, in which the compensating means is formed of a magnetic substance and provided as generally semi-circumferential bands on the surface of the rear plate.

In other words, the compensating means for compensating miss-convergence due to magnetic features of the deflection yoke is comprised of a pair of iron plates 10 and 20 in one side of the rear plate 145 adjacent to the neck [portion] part 130 of the coil separator 100. The iron plates 10 and 20 are arranged to oppose each other about the neck [portion] part 130.

Please amend the paragraph bridging Page 9 starting at Line 23 to Page 10, Line 1 to read as follows:

The compensating means or the iron plates 10 and 20 are provided to oppose each other as turned to each other with the angle of 180° at same distance, and coupled together to partially cover the outer periphery of the neck [portion] part 130.

Please amend the paragraph starting at Page 10, Line 2 to read as follow:

In other words, the pair of iron plates 10 and 20 are coupled together to partially wrap the outer surface of the neck [portion] part 130.

Please amend the paragraph starting at Page 10, Line 5 to read as follows:

Meanwhile, the pair of iron plates 10 and 20 are constructed to have a semi-circular configuration about the neck [portion] part 130 and formed of a plate with a certain thickness.

Please amend the paragraph starting at Page 10, Line 11 to read as follows:

In order to solve the problem that distortion degradation is caused from N/S distortion and a negative tendency of a pin magnetic field as the CRT is flattened, the deflection yoke of the invention configured like this firstly compensates convergence by adjusting the convergence features via magnet attachment and position displacement of the ferrite cores 105 or magnetic field variation, in which the iron plates 10 and 20 are provided in the rear plate 145 in opposed positions in the shape of wrapping the neck [portion] part 130 to change PQH features into a positive tendency from the negative tendency generated during this

process as shown with solid lines in Fig.18 to Fig. 23 show convergence patterns on a screen in a deflection yoke adopting a compensating means according to the invention, in which a strong barrel magnetic field is generated in the neck part side by the compensating means and resultantly misconvergence on the screen indicated with a dotted line is compensated into the state indicated by a solid line.

Please amend the paragraph bridging Page 10, Line 22 to Page 11, Line 1 to read as follows:

Numerical values of convergence features of the deflection yoke where the pair of iron plates 10 and 20 are provided as opposed in one side of the rear plate 145 adjacent to the neck [portion] part 130 are compared with those where the iron plates 10 and 20 are not provided as in Table 1:

Please amend the paragraph at Page 11, Line 4 to read as follow:

As described hereinbefore, it can be seen that the convergence features of the deflection yoke having the pair of iron plates 10 and 20 in the neck [portion] part 130 are improved compared to the conventional deflection yoke.

Please amend the paragraph starting at Page 11, Line 10 to read as follow:

In other words, according to the deflection yoke of the invention as described hereinbefore, the negative tendency of PQH according to the flattening of the CRT can be changed into the positive tendency by providing the compensating iron plates in the rear plate side of the coil separator in the shape of wrapping the neck [portion] part.